Qubino

Flush RGBW Dimmer

SKU: GOAEZMNHWD1

Quickstart

This is a **Light Dimmer** for **Europe**. To run this device please connect it to your mains power supply. Include the R.G.B.W. color LED Dimmer into the Z-Wave network, press service button 3 times in 2 seconds. If the device is properly include the green light will remains on.

Important safety information

Please read this manual carefully. Failure to follow the recommendations in this manual may be dangerous or may violate the law. The manufacturer, importer, distributor and seller shall not be liable for any loss or damage resulting from failure to comply with the instructions in this manual or any other material. Use this equipment only for its intended purpose. Follow the disposal instructions. Do not dispose of electronic equipment or batteries in a fire or near open heat sources.

What is Z-Wave?

Z-Wave is the international wireless protocol for communication in the Smart Home. This device is suited for use in the region mentioned in the Quickstart section.

Z-Wave ensures a reliable communication by reconfirming every message (**two-way communication**) and every mains powered node can act as a repeater for other nodes (**meshed network**) in case the receiver is not in direct wireless range of the transmitter.

This device and every other certified Z-Wave device can be **used together with any other certified Z-Wave device regardless of brand and origin** as long as both are suited for the same frequency range.

If a device supports **secure communication** it will communicate with other devices secure as long as this device provides the same or a higher level of security. Otherwise it will automatically turn into a lower level of security to maintain backward compatibility.

For more information about Z-Wave technology, devices, white papers etc. please refer to www.z-wave.info.

Product Description

Qubino Flush RGBW module is used to control RGB/RGBW strips and LED strips or bulbs to create countless colour options and has 5 special scene effects. It can also control halogen lights and fans. Its extremely small size allows for easy installation behind wall sockets and switches. Controlled devices may be powered by 12 or 24 VDC. All IN and OUT terminals may be user configured for LED control or 100 kΩ signal readouts.

Prepare for Installation / Reset

Please read the user manual before installing the product.

In order to include (add) a Z-Wave device to a network it **must be in factory default state.** Please make sure to reset the device into factory default. You can do this by performing an Exclusion operation as described below in the manual. Every Z-Wave controller is able to perform this operation however it is recommended to use the primary controller of the previous network to make sure the very device is excluded properly from this network.

Reset to factory default

This device also allows to be reset without any involvement of a Z-Wave controller. This procedure should only be used when the primary controller is inoperable.

Please note that re-including the proudct will reset the data to the default values. Use this procedure only in the event that the network primary controller is missing or otherwise inoperable.

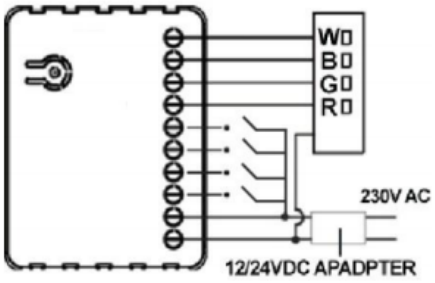
Safety Warning for Mains Powered Devices

ATTENTION: only authorized technicians under consideration of the country-specific installation guidelines/norms may do works with mains power. Prior to the assembly of the product, the voltage network has to be switched off and ensured against re-switching.

Installation

- Before the installation disconnect power supply (12-24VDC)
- Connect the module according to electrical diagram.

Electrical Diagram



Notes for diagram:

12/24VDC - Power supply	IN4 - Potential free / 100KΩ
GND - Power supply ground	R - Output assigned to IN1
IN1 - Potential free / 100KΩ	G - Output assigned to IN2
IN2 - Potential free / 100KΩ	B - Output assigned to IN3
IN3 - Potential free / 100KΩ	W - Output assigned to IN4

- Pull the antenna out of the holder
- Locate the antenna far from metal elements (as far as possible).
- Do not shorten the antenna.

Warning!
1. The RGBW Controller is suggested to operate in low voltage circuits of 12VDC or 24VDC. Connecting higher voltage load may result in the RGBW Controller damage. Please refer to the following table.

Current of RGBW Strip	Stranded Wire
High current	18 AWG
Low current	22 AWG

2. The RGBW Controller must be powered by the same voltage as the connected light source. I.e. if controlling 12V LED strip, the module must be connected to 12V power supply. Similarly, if controlling 24V RGBW strip, the RGBW Controller must be powered by 24V voltage supply.
3. The RGBW Controller has 100KΩ input. There is no 100KΩ output. Output is controlled by PWM at 488Hz.
4. The RGBW Controller must be powered by 12VDC or 24 VDC stabilized power supply with outputs load capacity matched to loads voltage.
5. In case of connecting long RGBW/RGB/LED strips voltage drops may occur, resulting in lower light brightness further from R/G/B/W outputs. To eliminate this effect it"s recommended to connect few shorter strips in parallel connection instead of one long strip connected serially. Maximum recommended wire length, used to connect R/G/B/W outputs with a RGBW/RGB/LED strip is 10 m. Observe connected loads manufacturer recommendations towards connection wire diameter.
6. For connection of IN1~IN4, it is suggested that you connect the 4 inputs individually to the same type of deivce. The devices can be as follows: the rotary swtich, the toggle switch, or the push switch.
7. When the Controller is damaged or lost, and you have already transferred the control function to an external control switch before, the product can be normally operated. In other case, please purchase a new Controller, press the Include/Exclude Button three times to exclude the device, and then include the device with the original installation steps, the device can be restored to normal operation. Please note that reincluding the product will reset the data to the default values. Use this procedure only in the event that the network primary controller is missing or otherwise inoperable.

Inclusion/Exclusion

On factory default the device does not belong to any Z-Wave network. The device needs to be **added to an existing wireless network** to communicate with the devices of this network. This process is called **Inclusion**.

Devices can also be removed from a network. This process is called **Exclusion**. Both processes are initiated by the primary controller of the Z-Wave network. This controller is turned into exclusion respective inclusion mode. Inclusion and Exclusion is then performed doing a special manual action right on the device.

Inclusion

Include the R.G.B.W. color LED Dimmer intor the Z-Wave network, press service button 3 times in 2 seconds. If the device is properly include the green light will remains on.

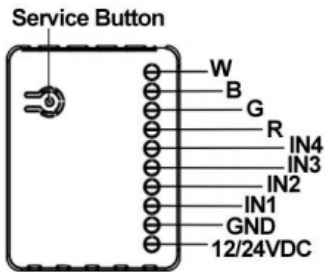
Exclusion

Exclude the Flush RGBW Dimmer into Z-Wave network, press 3 times in 2 seconds. If the device is proporly excluded, the green light will blink and data will be reset to the factory default values.

Auto-Inclusion

Beside the standard inclusion this devices supports the so called **auto inclusion**. Right after powering up the device remains in inclusion state and can be included by (any) gateway without further actions on the device itself. The auto inclusion mode will time out after some time.

Product Usage



1. Connect the R.G.B.W. Color LED Dimmer according to wiring diagram.
- First, connect RGBW strip, outputs (R,G,B,W) RGB/RGBW/LED diodes, halogen lights, or inputs (IN1~IN4).
- Second, connect the power supply.
If the device is properly connected, the RGBW strip will blink once. Note that the device must be powered by a dedicated stabilized power adapter.
2. In the status of the factory default (Not Paired), the red light and green light will blink by turns, eg. red, green, red, green, etc..
3. Include the R.G.B.W. Color LED Dimmer into the Z-wave network, press service button 3 times in 2 seconds. If the device is properly included, the green light will remains on.
4. Exclude the Flush RGBW Dimmer into the ZWave network, press 3 times in 2 seconds. If the device is properly excluded, the green light will blink and the data will be reset to the factory default values.
5. Please pull out the antenna and keep it at 90 degree to enhance the RF signals.
6. Support auto inclusion: Install the device, connect with the power, and the auto inclusion function will work in about 2 minutes.
7. Support remote exclusion: Through configuration setting. Please refer to the following table.

ID	Size	Value
240	1 byte	1

LED indication

Status	LED Signal	Remark
Not Paired	Solid Red	
Paired up	Solid Green	
Inclusion	Blinking Green (Interval: 1	Touch three times (Must release in 2 sec.)
Exclusion	Blinking Green (Interval: 1 sec.)	Touch three times (Must release in 2 sec.)
Auto inclusion	Blinking Green (Interval: 1 sec.)	Connect/disconnet power to connect with Z-wave network
Hardware button		1. Add device 2. Delete device 3. Restore to defult value 4. Set association
Input (I1~I4)		Control RGBW channel(I1:R ~I4:W)

Input type	Remark
Momentary	Monostable or push button switch
Toggle	Bistable switch
Toggle w/Memory	**ON:** Active for closing terminals **OFF:** Active for opening terminals

Input operating mode	Remark
Normal	Each given switch key assigned to one output channel
Brightness	All channels are controlled together
Rainbow	Transition through all colours spectrum (Operates on RGB channels only)

Quick trouble shooting

Here are a few hints for network installation if things dont work as expected.

1. Make sure a device is in factory reset state before including. In doubt exclude before include.
2. If inclusion still fails, check if both devices use the same frequency.
3. Remove all dead devices from associations. Otherwise you will see severe delays.
4. Never use sleeping battery devices without a central controller.
5. Dont poll FLIRS devices.
6. Make sure to have enough mains powered device to benefit from the meshing

Association - one device controls an other device

Z-Wave devices control other Z-Wave devices. The relationship between one device controlling another device is called association. In order to control a different device, the controlling device needs to maintain a list of devices that will receive controlling commands. These lists are called association groups and they are always related to certain events (e.g. button pressed, sensor triggers, ...). In case the event happens all devices stored in the respective association group will receive the same wireless command wireless command, typically a 'Basic Set' Command.

Association Groups:

Group Number	Maximum Nodes	Description
1	1	Lifeline

Configuration Parameters

Z-Wave products are supposed to work out of the box after inclusion, however certain configuration can adapt the function better to user needs or unlock further enhanced features.

IMPORTANT: Controllers may only allow configuring signed values. In order to set values in the range 128 ... 255 the value sent in the application shall be the desired value minus 256. For example: To set a parameter to 200 it may be needed to set a value of 200 minus 256 = minus 56. In case of a two byte value the same logic applies: Values greater than 32768 may needed to be given as negative values too.

Parameter 1: Input switch type

NOTE: Please power cycle the device when parameter is changed.
Size: 1 Byte, Default Value: 1

Setting	Description
1	bi-stable switch type
2	mono stable (push button) switch type

Parameter 2: Switch mode

NOTE: Using this parameter, it is possible to select various modes of RGBW Dimmer operation.
Size: 1 Byte, Default Value: 1

Setting	Description
1	Normal Mode
2	Brightness Mode
3	Rainbow Mode

Parameter 3: Auto scene mode set
NOTE: Activation of the programmed scene changing color shades.
Size: 1 Byte, Default Value: 0

Setting	Description
1	Ocean
2	Lightning
3	Rainbow
4	Snow
5	Sun

Parameter 4: Auto scene duration
NOTE: Using this parameter, it is possible to change Auto scene mode duration.
Size: 1 Byte, Default Value: 3

Setting	Description
1 - 127	delay duration is from 1s to 127s
-128 - -1	delay duration is from 1min. to 127min.

Parameter 240: Remote exclusion
Support remote exclusion: Through configuration setting.
Size: 1 Byte, Default Value: 0

Setting	Description
1	Remote exclusion

Technical Data

Dimensions	41x32x15 mm
Weight	14 gr
Hardware Platform	ZM5101
EAN	3830062070621
IP Class	IP 20
Voltage	12 / 24V DC
Load	At 12V- 156W combined; At 24V- 312W combined
Device Type	Light Dimmer Switch
Generic Device Class	Multilevel Switch
Specific Device Class	Routing Multilevel Switch
Network Operation	Always On Slave
Firmware Version	02.07
Z-Wave Version	04.18
Certification ID	ZC10-17015398
Z-Wave Product Id	0159.0001.0054
Frequency	Europe - 868,4 Mhz
Maximum transmission power	5 mW

Supported Command Classes

- Basic
- Switch Binary
- Switch Multilevel
- Switch Color
- Association Grp Info
- Device Reset Locally
- Zwaveplus Info
- Configuration
- Manufacturer Specific
- Powerlevel
- Firmware Update Md
- Association
- Version

Explanation of Z-Wave specific terms

- **Controller** — is a Z-Wave device with capabilities to manage the network. Controllers are typically Gateways,Remote Controls or battery operated wall controllers.
- **Slave** — is a Z-Wave device without capabilities to manage the network. Slaves can be sensors, actuators and even remote controls.
- **Primary Controller** — is the central organizer of the network. It must be a controller. There can be only one primary controller in a Z-Wave network.
- **Inclusion** — is the process of adding new Z-Wave devices into a network.
- **Exclusion** — is the process of removing Z-Wave devices from the network.
- **Association** — is a control relationship between a controlling device and a controlled device.
- **Wakeup Notification** — is a special wireless message issued by a Z-Wave device to announces that is able to communicate.
- **Node Information Frame** — is a special wireless message issued by a Z-Wave device to announce its capabilities and functions.